IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/782,255
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Inventorship... Salesin et al.
Applicant...Microsoft Corp.
Group Art Unit 2676
Examiner ....Amin
Attorney's Docket No. MS1-539usc1
Title: "Methods and Systems for Hinting Fonts"

APPEAL BRIEF

To: Commissioner for Patents
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Pursuant to 37 C.F.R. §41.37, Applicant hereby submits an appeal brief for application 10/782,255, filed February 19, 2004, within the requisite time from the date of filing the Notice of Appeal. Accordingly, Applicant appeals to the Board of Patent Appeals and Interferences seeking review of the Examiner's rejections.

Appeal Brief Items   <u>Page</u>

Application No. 10/782,255

(1) Real Party in Interest

The real party in interest is Microsoft Corporation, the assignee of all right, title and interest in and to the subject invention.

(2) Related Appeals and Interferences

Appellant is not aware of any other appeals, interferences, or judicial proceedings which will directly affect, be directly affected by, or otherwise have a bearing on the Board's decision to this pending appeal.

(3) Status of Claims

Claims 1-42 stand rejected and are pending in the Application. Claims 1-42 are set forth in the Appendix of Appealed Claims on page 21.

(4) Status of Amendments

A first Office Action was issued on November 7, 2005.

A Response was filed on November 29, 2005. No claims were amended.

A Final Office Action was issued on January 26, 2006.

A Notice of Appeal was filed on February 24, 2006.

(5) Summary of Claimed Subject Matter

A concise explanation of each of the independent claims is included in this Summary section, including specific reference characters. These specific reference characters are examples of particular elements of the drawings for

certain embodiments of the claimed subject matter and the claims are not limited to solely the elements corresponding to these reference characters.

With regard to claim 1, a method of providing a hinted font comprises: selecting a first TrueType font that has been hinted with hints that define constraints between control points associated with individual characters of the font (Page 16, lines 11-15; Fig. 5, 500); identifying individual characters of a second TrueType font that correspond to individual characters of the first TrueType font, the second TrueType font being different from the first TrueType font, individual characters of the second TrueType font being unhinted (Page 16, lines 15-17; Fig. 5, 502); and transferring hints from characters of the first TrueType font to individual corresponding characters of the second TrueType font (Page 17, lines 19-21; Fig. 5, 512).

With regard to claim 18, a method of providing a hinted TrueType font comprises: providing a source character from a fully hinted TrueType font from which hints are to be transferred, the source character having multiple control points that are constrained by the hints (Page 16, lines 11-15; Fig. 5, 500); providing a target character from a different TrueType font to which hints from the source character are to be transferred, the target character having control points that will be constrained by the transferred hints (Page 16, lines 15-17; Fig. 5, 502); and transferring hints associated with the source character and that refer to control points on the source character to hints associated with the target character and that refer to control points on the target character (Page 17, lines 19-21; Fig. 5, 512).

With regard to claim 32, a method of providing a hinted font comprises: defining hints for a glyph of a first font, the hints being defined by one or more

4

statements that contain multiple values that define constraints for the glyph, at least one of the values referencing a table entry that corresponds to a table value that is used to constrain the glyph (Page 27, line 9 – Page 30, line 12; Fig. 14); establishing an association between the glyph of the first font and a glyph of a second font, the second font being different from the first font (Page 27, line 9 – Page 30, line 12; Fig. 14); and translating the one or more statements so that the one or more statements now pertain to and define constraints for the glyph of the second font(Page 27, line 9 – Page 30, line 12; Fig. 14).

With regard to claim 39, an automated hinting system comprises: a computer-readable medium; one or more processors; computer-readable instructions resident in the computer-readable medium which, when executed by the one or more processors, cause the automated hinting system to: select a first TrueType font that has been hinted with hints that define constraints between control points on individual characters of the font (Page 16, lines 11-15; Fig. 5, 500); identify individual characters of a second TrueType font that correspond to individual characters of the first TrueType font, the second TrueType font being different from the first TrueType font, individual characters of the second TrueType font being unhinted (Page 16, lines 15-17; Fig. 5, 502); and transfer hints from characters of the first TrueType font to individual corresponding characters of the second TrueType font (Page 17, lines 19-21; Fig. 5, 512).

(6)   Grounds of Rejection to be Reviewed on Appeal

Claims 1-26 and 32-38 stand rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,760,028.

Claims 32, 34-36 and 38 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,982,387 to Hellmann.

Claim 37 stands rejected under 35 U.S.C. § 103(a) as being obvious over Hellmann in view of U.S. Patent No. 5,155,805 to Kaasila.

Claims 1-31, 33 and 39-42 stand rejected under 35 U.S.C. § 103(a) as being obvious over Hellmann in view of U.S. Patent No. 5,577,183 to Weyand.

(7)   Argument
A.   The obviousness-type double patenting rejection is inappropriate and must be withdrawn.

Claims 1-26 and 32-38 stand rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,760,028.

In making out the rejection of **claim 1**, the Office argues that "all of the features are found in claim 1 (6,760,028), except that current application has a broader claim than the patent (6,760,028). However, it would have been obvious to one of ordinary skill in the art ... to broaden the claim by eliminating some features." See, Office Action, Page 4, Para. 5.

Applicant respectfully submits that this is not the standard under which an obviousness-type double patenting rejection is to be made out.

The double patenting determination involves two inquiries. First, is the same invention claimed twice? *General Foods Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 1278, 23 USPQ2d 1839, 1843 (Fed.Cir.1992)*. This inquiry hinges upon the scope of the claims in question. *Id. at 1280; In re Vogel, 422 F.2d 438, 441, 164 USPQ 619, 621-22 (CCPA 1970)*. If the claimed inventions are identical in scope, the proper rejection is under 35 U.S.C. § 101 because an inventor is entitled to a single patent for an invention. *Miller v. Eagle Mfg. Co., 151 U.S. 186, 197, 14 S.Ct. 310, 314, 38 L.Ed. 121 (1894); In re Stanley, 214 F.2d 151, 153, 102 USPQ 234, 236 (CCPA 1954)*

If one claimed invention has a broader scope than the other, the court must proceed to a second inquiry: whether one claim defines merely an obvious variation of the other patent claim. *Vogel, 422 F.2d at 441.*

Here, the Office has not offered any explanation as to how claim 1 of the present application merely constitutes an obvious variation of the subject matter recited in claim 1 of the '028 Patent. Rather, the Office has simply argued that it would be obvious to "broaden the claim by eliminating some of the features." The Office has failed to use the proper standard in making out this rejection.

Claims 2-17 are similarly rejected using the same reasoning. Accordingly, the Office has failed to use the proper standard in making out the rejections of these claims.

In making out the rejection of **claim 18**, the Office argues that all of the features are found in claim 17 of the '028 Patent except that the TrueType font of the target character is different than the TrueType font of the source character. The Office then reasons that it would be "obvious…to realize that for transferring

the hints from the source character to the target character, the TrueType font for the source character would have to be different from the TrueType font of the target character." See Office Action, page 7, Para. 22.

Applicant respectfully submits that this is mere unsubstantiated speculation or opinion that is unsupported by any legal reasoning or authority whatsoever. The Office has failed to use the proper standard in making out this rejection.

Claims 19-26 are similarly rejected using the same reasoning. Accordingly, the Office has failed to use the proper standard in making out the rejections of these claims.

In making out the rejection of **claim 32**, the Office argues that "all of the features are found in claim 23 (6,760,028), except that current application has a broader claim than the patent (6,760,028). However, it would have been obvious to one of ordinary skill in the art ... to broaden the claim by eliminating some features." See, Office Action, Page 9, Para. 31.

As noted above, this is not the proper standard for making out an obviousness-type double patenting rejection. Accordingly, the Office has failed to use the proper standard in making out this rejection.

Claims 33-38 are similarly rejected using the same rationale. Accordingly, the Office has failed to use the proper standard in making out the rejections of these claims.

B.   The rejections under 35 U.S.C. §103(a) over Hellman, over Hellman and Kaasila, and over Hellman and Weyand do not establish a prima facie case of obviousness.

The discussion below proceeds as follows. First, a section entitled "The §103 Standard" is provided and describes the standard by which obviousness

Application No. 10/782,255

rejections are made out. Following this, a section entitled "The Hellman Reference" is provided and describes salient aspects of Hellman's disclosure. Hellman is either the sole or primary reference in all of the rejections. Next, a section entitled "The Claims" is provided and presents Applicant's reasoning as to why the Office has not established a prima facie case of obviousness.

The §103 Standard

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).*

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fritch, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).*

A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art *teaches away* from the claimed combination. A

Application No. 10/782,255

reference is said to teach away when a person or ordinary skill, upon reading the reference, would be led in a direction divergent from the path that the applicant took. *In re Gurley*, 31 USPQ 2d 1130, 1131 (Fed. Cir 1994).

The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed").

The Hellman Reference

In making out the rejections of the claims, the Office relies principally and primarily on the Hellmann reference.

Before specifically considering Hellmann, Applicant believes that there are fundamental differences between subject matter disclosed in Applicant's disclosure and the subject matter disclosed in Hellmann. Specifically, in various embodiments described and claimed in Applicant's disclosure, characters of a first font are utilized to transfer hints to characters of a second *different* font.

Hellmann, on the other hand, discloses a method that compares strokes of a character with different strokes of the same character. In other words, character strokes are modified in Hellmann based on other strokes of the same character. ***Hints are not transferred between different fonts.*** This is fundamentally different from the embodiments that are described and claimed in the present application.

Exploring Hellmann in more detail, consider the following. Hellmann discloses a method and system for assigning hints and constructing a font file.

The gist of Hellmann's disclosure is perhaps best appreciated from the discussion of its Fig. 1. Specifically, and with reference to Hellmann's Fig. 1, an outline-font creation apparatus architecture is shown and described. The apparatus is employed for cutting an outline of a character into elements that are referred to as "strokes". Examples of strokes are shown at STi (i=1, 2 . . .). Hint data is then assigned to the strokes, and a character is expressed as a collection of strokes.

Hellmann instructs that the apparatus includes a stroke memory 1 for storing the strokes STi, a stroke classifying unit 2 for dividing strokes STi having similar outlines into classes Ci, a classified-stroke memory 3 for storing the classified strokes according to class, a hint-assignment learning unit 4 for assigning a hint, by operator operation, to a predetermined position of the outline of a representative element (master stroke) of each class Ci, a master-stroke hint information memory 5 for storing hint information which prevails when a hint is assigned by operator operation, and an automatic hint assignment unit 6 for assigning hint information automatically to elements of the class, to which the master element belongs, using learned hint information of the master stroke.

As Hellmann instructs, the stroke classifying unit 2 divides strokes having similar outlines into classes, and the hint-assignment learning unit 4 assigns a hint, by operator operation, to a predetermined position of the outline of the representative element (master stroke) of each class and stores the hint information in the memory 5, thereby learning hint assignment. The automatic hint assignment unit 6 assigns hint information automatically to elements of the class to which the master element belongs, using learned hint information of the master stroke.

11

As Hellmann instructs, character elements whose shapes are similar and to which identical hint information is assigned are divided into classes automatically, a hint is assigned solely to the master element of each class by operator operation and the system is made to learn the assignment of the hint. The system subsequently assigns hints to the other elements automatically. Thus, it appears from a thorough reading of Hellmann, that Hellmann is directed to methods and systems that work only upon characters of the same font. For example, as Hellmann describes the font producing tool in more detail, Hellmann states that the font producing tool (Fig. 3) "divides an existing font into strokes, divides the strokes into parts, assigns hints to the outline shapes of the parts...." See, e.g. column 9, lines 34-60. This teaching and disclosure simply cannot be ignored.

Thus, it appears that the hints that are assigned in Hellmann are assigned only to strokes within the same font. See, e.g. column 11, lines 38-45.

Looking a bit closer at Hellman's disclosure, consider the following. A great deal of the processing that Hellmann describes pertains to defining the strokes within the same font, and then classifying the strokes into classes. For example, in column 10 starting at line 57 and continuing through column 13, Hellmann describes the process by which individual characters within a font are cut into strokes and classified according to similarities in their outlines. Fig. 6A shows a particular character having illustrated strokes, and Fig. 6B shows individual stroke classes. Notice that within each stroke class the shapes are similar if not the same. Hellmann instructs that hints are then assigned to predetermined positions of the outline of a master stroke in each class. See, e.g. column 11, lines 6-20. It is from these initially defined hints that Hellmann's

system automatically assigns hints to other strokes within a particular master stroke's class, within the same font.

The Claims

Claim 1

Claim 1 recites a method of providing a hinted font comprising:

- selecting a first TrueType font that has been hinted with hints that define constraints between control points associated with individual characters of the font;
- identifying individual characters of a second TrueType font that correspond to individual characters of the first TrueType font, *the second TrueType font being different from the first TrueType font*, individual characters of the second TrueType font being unhinted; and
- transferring hints from characters of the first TrueType font to individual corresponding characters of the second TrueType font.

In making out the rejection of this claim, the Office argues that Hellmann discloses selecting a first font as recited above and cites to column 11, lines 7-25 and Fig. 7 in support therefor. The Office then argues that Hellmann discloses identifying individual characters of a second font as recited above, citing to column 5, lines 55-59 in support therefor. The Office argues that Hellmann's master element constitutes a first font and other similar shape elements constitute a second font.

Applicant respectfully, but strongly, disagrees with the Office's interpretation and application of Hellmann. Specifically, Hellmann teaches that individual characters are "cut" into elements referred to as "strokes". This is perhaps best appreciated from Hellmann's Figs. 6A and 6B. The individual

strokes described by Hellmann in this example come from the same character, not from different fonts. These individual strokes are classified into classes (see Fig. 6B, for example) and then processed according to Hellmann's description.

Nowhere can Applicant find any discussion whatsoever of a process in Hellmann that selects a first font, identifies individual characters of a second different font that correspond to characters of the first font, and transfers hints from characters of the first font to individual corresponding characters of the second font. Applicant respectfully submits that the Office is not free to ascribe properties to Hellmann that it simply does not have.

In point of fact, Hellmann appears to *teach directly away* from any such concept by specifically describing a process which appears to transfer hints within portions of characters within the *same font*. Additionally, to the extent that this claim recites features that are neither disclosed nor suggested by Hellmann, the rejection over the combination with Weyand adds nothing of significance. Accordingly, for at least this reason, the Office has not established a *prima facie* case of obviousness and this claim is allowable.

Claims 2-17

Claims 2-17 depend from claim 1. In making out the rejections of these claims, the Office cites to various portions of Hellman as disclosing the specific features recited in these claims. Applicant respectfully submits, in view of the Office's misinterpretation and application of Hellman, it is simply irrelevant what these specific excerpts of Hellman purportedly disclose. That is, given that Hellman neither discloses nor suggests (and in fact teaches away from)

14

transferring hints between *different fonts*, it is impossible for it disclose the subject matter that Office argues it does in this context.

Accordingly, for at least this additional reason, these claims are allowable.

Claim 18

Claim 18 recites a method of providing a hinted TrueType font comprising:

- providing a source character from a fully hinted TrueType font from which hints are to be transferred, the source character having multiple control points that are constrained by the hints;
- providing a target character from a *different* TrueType font to which hints from the source character are to be transferred, the target character having control points that will be constrained by the transferred hints; and
- transferring hints associated with the source character and that refer to control points on the source character to hints associated with the target character and that refer to control points on the target character.

This claim recites that the act of providing a target character provides a target character from a TrueType font that is *different* from the TrueType font of the source character. In making out the rejection of this claim, the Office essentially makes that same argument that it did with respect to claim 1. Applicant respectfully notes that Hellmann does not appear to disclose or suggest transferring hints between different fonts. Rather, as noted above, Hellmann appears to teach directly away from any such notion by specifically teaching a process that appears to transfer hints between portions of characters from the *same font*. Additionally, to the extent that this claim recites features that are neither disclosed nor suggested by Hellmann, the rejection over the combination with

15

Weyand adds nothing of significance. Accordingly, for at least this reason, this claim is allowable.

<u>Claims 19-31</u>

Claims 19-31 depend from claim 18. In making out the rejections of these claims, the Office cites to various portions of Hellman as disclosing the specific features recited in these claims. Applicant respectfully submits, in view of the Office's misinterpretation and application of Hellman, it is simply irrelevant what these specific excerpts of Hellman purportedly disclose. That is, given that Hellman neither discloses nor suggests (and in fact teaches away from) transferring hints between *different fonts*, it is impossible for it disclose the subject matter that Office argues it does in this context.

Accordingly, for at least this additional reason, these claims are allowable.

<u>Claim 32</u>

Claim 32 recites a method of providing a hinted font comprising:

- defining hints for a glyph of a *first font*, the hints being defined by one or more statements that contain multiple values that define constraints for the glyph, at least one of the values referencing a table entry that corresponds to a table value that is used to constrain the glyph;
- establishing an association between the glyph of the first font and a glyph of a *second font, the second font being different from the first font*; and

- translating the one or more statements so that the one or more statements now pertain to and define constraints for the glyph of the second font.

In making out the rejection of this claim, the Office argues that Hellmann discloses defining hints for a glyph of a first font as recited above and cites to column 11, lines 7-25 in support therefor. In addition, the Office argues that Hellmann discloses establishing an association as recited above and cites to column 5, lines 55-59 in support therefor. In making out this rejection, the Office argues that Hellmann discloses within a class, a master element which has been hinted and argues that this constitutes a first font. The Office further argues that the other similar shapes within the class that Hellmann discloses constitute a second font.

As noted above, Applicant respectfully but strongly disagrees with the Office's interpretation of this reference. Specifically, in the example that Hellmann describes, the master element and similar-shaped elements come from the *same character within the same font*. This being the case, it is *virtually impossible* for Hellmann to disclose or suggest the use of different fonts as specifically recited in this claim. **How is it possible that elements that come from the same character can constitute different fonts?** This interpretation is entirely inconsistent with the specific thrust of Hellman's disclosure. Applicant submits that the Office's interpretation is inaccurate and misplaced at best.

Hellmann appears to teach directly away from the subject matter of this claim. Applicant respectfully notes that the Office is not free to ascribe properties to Hellmann that it simply does not have. Accordingly, for at least this reason, this claim is allowable.

Claims 33-38

Claims 33-38 depend from claim 32. In making out the rejections of these claims, the Office cites to various portions of Hellman as disclosing the specific features recited in these claims. Applicant respectfully submits, in view of the Office's misinterpretation and application of Hellman, it is simply irrelevant what these specific excerpts of Hellman purportedly disclose. That is, given that Hellman neither discloses nor suggests (and in fact teaches away from) the use of *different fonts* as specifically recited in this claim, it is impossible for it disclose the subject matter that Office argues it does in this context.

Accordingly, for at least this additional reason, these claims are allowable.

Claim 39

Claim 39 recites an automated hinting system comprising:

- a computer-readable medium;
- one or more processors;
- computer-readable instructions resident in the computer-readable medium which, when executed by the one or more processors, cause the automated hinting system to:
    - select a first TrueType font that has been hinted with hints that define constraints between control points on individual characters of the font;
    - identify individual characters of a second TrueType font that correspond to individual characters of the first TrueType font, *the second TrueType font being different from the first TrueType font*, individual characters of the second TrueType font being unhinted; and
    - transfer hints from characters of the first TrueType font to individual corresponding characters of the second TrueType font.

In making out the rejection of this claim, the Office cites to the rejection that it made of claim 1. For all of the reasons set forth above with respect to why claim 1 is allowable over Hellmann, this claim is allowable over Hellmann.

Claims 40-42

Claims 40-42 depend from claim 39. In making out the rejections of these claims, the Office cites to various portions of Hellman as disclosing the specific features recited in these claims. Applicant respectfully submits, in view of the Office's misinterpretation and application of Hellman, it is simply irrelevant what these specific excerpts of Hellman purportedly disclose. That is, given that Hellman neither discloses nor suggests (and in fact teaches away from) transferring hints between *different fonts*, it is impossible for it disclose the subject matter that Office argues it does in this context.

Accordingly, for at least this additional reason, these claims are allowable.
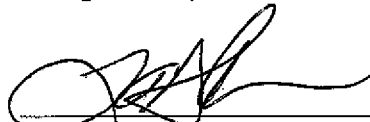
Conclusion

The Office has not established a prima facie case of obviousness.

Accordingly, Applicant respectfully requests that the rejections be overturned and

that the pending claims be allowed to issue.

Respectfully Submitted,

Dated: 4/24/06

By: _____

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(8)   Appendix of Appealed Claims

1.   (Original) A method of providing a hinted font comprising:

selecting a first TrueType font that has been hinted with hints that define

constraints between control points associated with individual characters of the

font;

identifying individual characters of a second TrueType font that correspond

to individual characters of the first TrueType font, the second TrueType font being

different from the first TrueType font, individual characters of the second

TrueType font being unhinted; and

transferring hints from characters of the first TrueType font to individual

corresponding characters of the second TrueType font.

2.   (Original) The method of claim 1, wherein the first TrueType font

comprises a font that has control-point level hints attached to it and said

transferring of the hints comprises transferring the control-point level hints from

characters of the first TrueType font to control-point level hints in characters of

the second TrueType font.

3.   (Original) The method of claim 2, wherein at least one control point

of the first TrueType font has been programmatically relocated to lie on top of

another control point of the first TrueType font.

4.   (Original) The method of claim 1, wherein said selecting comprises selecting the first TrueType font from among a number of different fully hinted TrueType fonts.

5.   (Original) The method of claim 1, wherein said selecting comprises automatically selecting the first TrueType font from among a number of different fully hinted TrueType fonts that are resident in a library.

6.   (Original) The method of claim 1, wherein said selecting comprises further selecting a TrueType font that is different from the first and second TrueType fonts, and transferring hints from characters of the selected different TrueType font to individual characters of the second TrueType font.

7.   (Original) The method of claim 1, wherein said identifying comprises matching one or more contours on a character of the first TrueType font with one or more contours of a character of the second TrueType font.

8.   (Original) The method of claim 7, further comprising after said matching, pairing individual points associated with a contour of the character of the first TrueType font with individual respective points associated with a corresponding contour of the character of the second TrueType font.

9.   (Original) The method of claim 8, wherein said transferring comprises transferring hints that are defined in terms of the individual points associated with the contour of the character of the first TrueType font.

10.   (Original) The method of claim 8, wherein said transferring comprises transferring hints that are defined in terms of individual points associated with the contour of the character of the first TrueType font by changing the definition of the hints to refer to individual points associated with the contour of the character of the second TrueType font.

11.   (Original) The method of claim 8, wherein said pairing of the individual points defines one set of multiple point pairs, and further comprising defining multiple sets of point pairs, each set of point pairs comprising different pairings of points.

12.   (Original) The method of claim 11 further comprising:
calculating a score for each set of point pairs;
selecting a set of point pairs based upon the calculated score;
said transferring comprising using the selected set of point pairs as a basis for transferring the hints.

13.   (Original) The method of claim 12, wherein said calculating comprises:
for each individual pair of points, calculating an individual local score; and

summing the individual local scores for all of the individual pairs of points to provide an overall score for each set of point pairs;

said selecting of the set of point pairs comprising selecting the set with the best overall score.

14.   (Original) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 1.

15.   (Original) The method of claim 1, wherein said transferring comprises transferring one or more conditionally-specified hints.

16.   (Original) The method of claim 1 further comprising discarding a hint where it appears inappropriate for a character of the second TrueType font.

17.   (Original) The method of claim 1 further comprising defining at least one conditionally specified hint associated with a character of the first TrueType font, and transferring said conditionally specified hint if a condition associated with the conditionally specified hint is met by a corresponding character of the second TrueType font.

18.   (Original) A method of providing a hinted TrueType font comprising:

Application No. 10/782,255

providing a source character from a fully hinted TrueType font from which hints are to be transferred, the source character having multiple control points that are constrained by the hints;

providing a target character from a different TrueType font to which hints from the source character are to be transferred, the target character having control points that will be constrained by the transferred hints; and

transferring hints associated with the source character and that refer to control points on the source character to hints associated with the target character and that refer to control points on the target character.

19. (Original) The method of claim 18, wherein said transferring comprises modifying control point references contained in the hints.

20. (Original) The method of claim 18, wherein said transferring comprises modifying one or more values contained in a table that is referenced by at least one hint.

21. (Original) The method of claim 18, wherein said transferring comprises pairing individual control points associated with the source character with individual control points associated with the target character to define a set of multiple pairs of control points, and, for each pair of control points, calculating a score that characterizes the pair of control points.

22.   (Original) The method of claim 21, wherein the score characterizes the desirability of a match between the control points.

23.   (Original) The method of claim 22, wherein the desirability of the match is a function of incoming/outgoing directions that are associated with each control point.

24.   (Original) The method of claim 22, wherein the desirability of the match is a function of a control point constituting a local minimum or maximum.

25.   (Original) The method of claim 22, wherein the desirability of the match is a function of incoming/outgoing lines associated with the control points.

26.   (Original) The method of claim 22, wherein the desirability of the match considers whether each control point of a pair falls into one of a plurality of common bands that are defined for each character.

27.   (Original) The method of claim 21, wherein said transferring comprises:

defining multiple sets of multiple pairs of control points;

calculating a score for each pair of control points for each of the multiple sets,

summing individual control point pair scores for each set of multiple pairs of control points to provide an overall score;

selecting a set of multiple pairs of control points based upon the overall score; and

transferring the hints using the selected set of multiple pairs of control points as a basis for said transferring.

28. (Original) The method of claim 27, wherein the control points that comprise the multiple pairs comprise control points that are located on a contour associated with the individual character.

29. (Original) The method of claim 28, wherein the defining of the multiple sets of multiple pairs comprises, for each set:

selecting a control point on the source character as a starting point;

selecting a control point on the target character as a starting point;

pairing the two selected points;

selecting a different control point on the source character and pairing it with a selected control point on the target character and continuing to select and pair control points on the source character until there are no unpaired control points on the source character.

30. (Original) The method of claim 29, wherein each set of the multiple sets of multiples pairs comprises different pairings of selected points.

31.   (Original) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 18.

32.   (Original) A method of providing a hinted font comprising:

defining hints for a glyph of a first font, the hints being defined by one or more statements that contain multiple values that define constraints for the glyph, at least one of the values referencing a table entry that corresponds to a table value that is used to constrain the glyph;

establishing an association between the glyph of the first font and a glyph of a second font, the second font being different from the first font; and

translating the one or more statements so that the one or more statements now pertain to and define constraints for the glyph of the second font.

33.   (Original) The method of claim 32, wherein the first and second fonts comprise TrueType fonts.

34.   (Original) The method of claim 32, wherein said translating comprises manipulating at least some of the values of the one or more statements.

35.   (Original) The method of claim 32, wherein some of the values pertain to specific points on the glyph of the first font, and:

said establishing comprises establishing an association between the specific points on the glyph of the first font and specific points on the glyph of the second font; and

said translating comprises changing at least some of the values of the individual statements to correspond to the specific points on the glyph of the second font.

36.   (Original) The method of claim 35, wherein said changing of at least some values comprises changing a table value.

37.   (Original) The method of claim 36, wherein said changing of the table value comprises:

determining a plurality of natural distances in the glyph of the second font, the natural distances being defined relative to specific points in the glyph of the second font that are to be constrained by the table value; and

calculating a new table value for the table entry as a function of the natural distances.

38.   (Original) An automated hinting system programmed with instructions which execute to implement the method of claim 32.

39.   (Original) An automated hinting system comprising:

a computer-readable medium;

one or more processors;

Application No. 10/782,255

computer-readable instructions resident in the computer-readable medium which, when executed by the one or more processors, cause the automated hinting system to:

select a first TrueType font that has been hinted with hints that define constraints between control points on individual characters of the font;

identify individual characters of a second TrueType font that correspond to individual characters of the first TrueType font, the second TrueType font being different from the first TrueType font, individual characters of the second TrueType font being unhinted; and

transfer hints from characters of the first TrueType font to individual corresponding characters of the second TrueType font.

40.   (Original) The automated hinting system of claim 39, wherein the automated hinting system identifies the individual characters by matching one or more contours on a character of the first TrueType font with one or more contours of a character of the second TrueType font.

41.   (Original) The automated hinting system of claim 39, wherein the automated hinting system transfers the hints by pairing individual control points associated with characters and transferring hints that are defined in terms of the individual control points.

42.   (Original) The automated hinting system of claim 39, wherein the automated hinting system transfers the hints by pairing individual control points

30

associated with characters and transferring hints that are defined in terms of the individual control points, the transferring comprising changing a hint definition to refer to one or more control points associated with the character to which the hint is transferred.

(9)   Evidence appendix. None

(10)   Related proceedings appendix. None